

**ABSTRACT OF THE INVENTION**

[0062] A system for processing a thumbnail image from a microscope slide to determine tissue locations on the slide. The system comprises an image cropping component, a tissue finding component, and a scan control component. The image cropping component crops the thumbnail image and removes portions of the image that fall outside of determined slide boundaries. The cropped image from the image cropping component is inputted into the tissue finding component. The tissue finding component identifies tissue regions by applying a sequence of filters that incorporate knowledge of typical appearance and location of tissue and non-tissue slide regions. The tissue finding component outputs a tiling matrix whose values indicate which tiles should be imaged. The scan control component interprets the tiling matrix and transposes positions of the tiling matrix into actual stage coordinate for a microscopic imaging.